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09/766,142	01/19/2001	William D. Evans	D/A0A87	1295

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EXAMINER	
HOFFMAN, BRANDON S	

ART UNIT	PAPER NUMBER
2136	

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/766,142	EVANS, WILLIAM D.	
	Examiner	Art Unit	
	Brandon Hoffman	2136	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 January 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33,35,37,38,41 and 42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33,35,37,38,41 and 42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claim 1-33, 35, 37, 38, 41, and 42 are pending in this office action.

2. Applicant's arguments, filed January 26, 2005, have been fully considered but they are not persuasive.

Rejections

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

4. Claims 1-33, 35, 37, 38, 41, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carter (U.S. Patent No. 5,787,175) in view of Follendore, III (U.S. Patent No. 6,011,847).

Regarding claims 1, 15, and 31, Carter teaches a [secure content object] method/system for protecting an electronic document, comprising:

- Encrypting the electronic document using a document encryption key (fig. 6, ref. num 112 and col. 13, lines 4-17);

- Generating a multi-key encryption table for use in a multi-key encryption method, the table comprising at least one multi-key **encryption** component (fig. 6, ref. num 114, 116, and 118 and col. 13, line 18 through col. 14, line 22);
- Associating a user interface device with the encrypted header, the multi-key encryption table and the encrypted electronic document, wherein the user interface device comprises unencrypted information for identifying the electronic document and an interactive element for enabling a user to input a user authorization for access to at least a portion of the encrypted electronic document (fig. 9, ref. num 152 and col. 16, lines 16-29); and
- Combining the user authorization with each of the stored multi-key components in the multi-key encryption key table to decrypt the encrypted header (fig. 9, ref. num 160 and 162 and col. 16, line 60 through col. 17, line 26).

Carter does not teach **generating a plurality of dummy encryption components, wherein the multi-key encryption table includes no information that may identify a user or the electronic document,** or generating an encrypted header comprising information pertaining to the electronic document or upon a valid decryption of the encrypted header, decrypting the portion of the encrypted electronic document.

Follendore, III teaches generating an encrypted header comprising information pertaining to the electronic document (fig. 2, ref. num 224 and col. 1, lines 22-25); and upon a valid decryption of the encrypted header, decrypting the portion of the encrypted

electronic document (fig. 2, ref. num 242) and **generating a plurality of dummy encryption components, wherein the multi-key encryption table includes no information that may identify a user or the electronic document** (col. 8, line 51 through col. 9, line 7).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine generating an encrypted header comprising information pertaining to the electronic document and upon valid decryption of the header, decrypting the encrypted electronic document, and generating a plurality of dummy encryption components, wherein the table includes no information identifying a user or the document, as taught by Follendore, III, with the method/system of Carter. It would have been obvious for such modifications because a header defines the data portion of the document. When the header is decrypted, a decryption key contained in the header for decrypting the document allows the key to be transmitted safely. Also, the dummy data provides random data to include that will make the length of the data fields the same size; this aids in the encryption process (see col. 8, line 51 through col. 9, line 7 of Follendore, III).

Regarding claims 2, 16, and 32, the combination of Carter in view of Follendore, III/Person teaches wherein the encrypted header includes an encryption marker comprising a random number sequence followed by a derivable variation of the same random number sequence, wherein a valid decryption of the encryption marker

indicates that the document encryption key has been found (see fig. 2, ref. num 230, 232, and 234 Follendore, III).

Regarding claims 3 and 17, the combination of Carter in view of Follendore, III/Person teaches wherein the electronic document comprises content information that is formatted based on an object language having a set of formatting rules (see col. 8, lines 17-26 of Carter).

Regarding claims 4 and 18, the combination of Carter in view of Follendore, III/Person teaches wherein the user interface device comprises a second electronic document (see col. 5, lines 34-39 of Follendore, III).

Regarding claims 5 and 19, the combination of Carter in view of Follendore, III/Person teaches wherein the information pertaining to the electronic document comprises a user permission table for access to all or portions of the electronic document and wherein only those permitted portions of the electronic document are decrypted (see col. 8, lines 51-59 of Carter).

Regarding claims 6 and 20, the combination of Carter in view of Follendore, III/Person teaches wherein the encrypted header and the encrypted electronic document are encrypted using different encryption keys and wherein the multi-key

encryption table includes at least one multi-key component for each encryption key (see fig. 4, ref. num 428, 430, 432, and 434 of Follendore, III).

Regarding claims 7 and 21, the combination of Carter in view of Follendore, III/Person teaches wherein the encrypted header further comprises a fingerprint for identifying some predefined aspect of the electronic document (see fig. 2, ref. num 230, 232, and 234 of Follendore, III).

Regarding claims 8 and 22, the combination of Carter in view of Follendore, III/Person teaches wherein the electronic document comprises a plurality of individual electronic documents and the encrypted header comprises information pertaining to each of the individual electronic documents (see col. 9, lines 44-49 of Carter).

Regarding claims 9 and 23, the combination of Carter in view of Follendore, III/Person teaches wherein the information pertaining to the electronic document comprises a user permission table setting forth access to all or portions of each of the individual electronic documents and wherein only those permitted portions of the authorized electronic document are decrypted (see col. 8, lines 51-59 of Carter).

Regarding claims 10 and 24, the combination of Carter in view of Follendore, III/Person teaches wherein the content information is selected from the group consisting

of text, graphics, equations, tables, spreadsheets, pictures, video files, audio files, multimedia files and binary data of unknown format (see col. 8, lines 17-26 of Carter).

Regarding claims 11 and 25, the combination of Carter in view of Follendore, III/Person teaches wherein the object language comprises Adobe Acrobat (see col. 8, lines 17-26 of Carter).

Regarding claims 12 and 26, the combination of Carter in view of Follendore, III/Person teaches wherein the object language comprises a language which interprets Microsoft Word documents (see col. 8, lines 17-26 of Carter).

Regarding claims 13 and 27, the combination of Carter in view of Follendore, III/Person teaches wherein the encrypted header includes an encryption marker comprising a random number sequence followed by a derivable variation of the same random number sequence, wherein a valid decryption of the encryption marker indicates the header encryption key has been found (see fig. 2, ref. num 230, 232, and 234 Follendore, III); and wherein the encrypted electronic document includes an encryption marker comprising a random number sequence followed by a derivable variation of the same random number sequence, wherein a valid decryption of the encryption marker indicates the document encryption key has been found (see fig. 2, ref. num 234, 236, and 238 of Follendore, III).

Regarding claims 14, 28, and 33, the combination of Carter in view of Follendore, III/Person teaches wherein the electronic document includes a document ID and wherein the document encryption key includes a combination of the document ID, the user information and the multi-key components, for each authorized user (see fig. 4, ref. num 92 and 96 and col. 13, line 63 through col. 14, line 5 of Carter).

Regarding claim 29, the combination of Carter in view of Follendore, III/Person teaches wherein the electronic document comprises a first electronic document and an annotation associated therewith, wherein the annotation is encrypted using an encryption key associated with a user generating the annotation (see fig. 10, ref. num 176, 180 and 182 and col. 20, lines 51-65 of Carter); and wherein the encrypted header includes information pertaining to the first electronic document and the annotation (see col. 9, lines 56-61 of Follendore, III).

Regarding claim 30, the combination of Carter in view of Follendore, III/Person teaches wherein the multi-key encryption table is located remote from the user interface device (see col. 8, lines 27-39 of Carter).

Regarding claim 35, Carter teaches a method for creating a document with secure annotations, comprising:

- Providing an electronic document, wherein access to the electronic document is available to a first set of users (fig. 4, ref. num 54,90);

- Generating a plurality of annotations pertaining to the electronic document using the document language (fig. 10, ref. num 176);
- Encrypting each annotation using an annotation encryption key associated with a user generating the particular annotation, wherein access to an encrypted annotation is available to users having access to the respective annotation encryption key (fig. 10, ref. num 180 and 182 and col. 20, lines 51-65);

For each annotation encryption key:

- **Generating a multi-key encryption table for use in a multi-key encryption method, the table comprising at least one multi-key component** (fig. 6, ref. num 114, 116, and 118 and col. 13, line 18 through col. 14, line 22);
- **Providing a user interface for enabling a user to input a user authorization for access to at least a portion of an encrypted annotation** (fig. 9, ref. num 152 and col. 16, lines 16-29);
- **Combining the user authorization with each of the stored multi-key components in the multi-key encryption key table to decrypt the annotation, wherein valid decryption of the annotation indicates the correct annotation encryption key has been found** (fig. 11, ref. num 192); and
- Access to the **encrypted** electronic document is available to the first set of users and access to the encrypted annotations in the separate file is provided only to users having the required encryption keys (fig. 11, ref. num 192).

Carter does not teach concatenating the plurality of encrypted annotations in a second electronic document, and **merging the second electronic document and the encrypted electronic document into a third electronic document**.

Follendore, III teaches concatenating the plurality of encrypted annotations in a second electronic document (fig. 2, ref. num 224), and **merging the second electronic document and the encrypted electronic document into a third electronic document** (fig. 2, ref. num 222 and 224 contained within 218).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine concatenating the annotations in a second document and merging the second electronic document and the encrypted electronic document into a third electronic document, as taught by Follendore, III, with the method/system of Carter. It would have been obvious for such modifications because the annotations can become many for only one file. By combining the annotations into their own electronic document, they can be handled on their own with their own keys separate from the electronic document.

Regarding claim 37, the combination of Carter in view of Follendore, III teaches further comprising the step of:

- Encrypting the first electronic document using a document encryption key, wherein access to the encrypted electronic document is provided only to users

having the required encryption key (see fig. 6, ref. num 112 and col. 13, lines 4-17 of Carter);

- **Generating a multi-key encryption table for us in a multi-key encryption method, the table comprising at least one multi-key component** (see fig. 6, ref. num 114, 116, and 118 and col. 13, line 18 through col. 14, line 22 of Carter);
- **Generating an encrypted header comprising information pertaining to the electronic document** (see fig. 2, ref. num 224 of Follendore, III);
- **Providing a user interface for enabling a user to input a user authorization for access to at least a portion of the encrypted document** (see fig. 9, ref. num 152 and col. 16, lines 16-29 of Carter);
- **Combining the user authorization with each of the stored multi-key components in the multi-key encryption key table to decrypt the encrypted header, wherein valid decryption of the encryption header indicates the document encryption key has been found** (see fig. 9, ref. num 160 and 162 and col. 16, line 60 through col. 17, line 26 of Carter, and see fig. 2, ref. num 242 of Follendore, III).

Regarding claim 38, the combination of Carter in view of Follendore, III teaches further comprising adding an unencrypted header identifying the generating user to each encrypted annotation (see fig. 2, ref. num 220 of Follendore, III).

Regarding claim 41, the combination of Carter in view of Follendore, III teaches wherein the encrypted header includes an encryption marker comprising a random number sequence followed by a derivable variation of the same random number sequence, wherein a valid decryption of the encryption marker indicates the annotation encryption key has been found (see fig. 2, ref. num 230, 232, and 234 Follendore, III).

Regarding claim 42, the combination of Carter in view of Follendore, III teaches wherein the separate file and the electronic document are stored in different locations (see col. 9, lines 37-43 of Follendore, III).

Response to Arguments

5. Applicant amends claims 1, 11, 12, 15, 25, 26, 31, 35, 37, and 41.

6. Applicant argues:

a. Carter does not teach generating a multi-key encryption table comprising at least one multi-key component and a plurality of dummy encryption components, wherein the multi-key encryption key table includes no information that may identify a user or the electronic document (page 13, second paragraph).

b. Carter does not teach combining the user authorization with each of the stored multi-key components in the multi-key encryption table to decrypt the encrypted header (page 13, third paragraph).

c. The dependent claims are allowable based on their dependency on the independent claims (page 14, second paragraph).

Regarding argument (a), examiner disagrees with applicant. These limitations were newly added; therefore, a new ground of rejection is allowable while still maintaining a final rejection.

Regarding argument (b), examiner disagrees with applicant. Carter teaches that the supplied password is combined with each member of the work group document until a successful result is found. If at the end of the list there are no results found, it is determined that the member does not belong to the work group document (see col. 16, lines 51-59 of Carter). This shows that the user authorization is combined with each of the stored multi-key components in the multi-key encryption table to decrypt the encrypted header, as claimed by applicant. Accordingly, the independent claims stand as rejected.

Regarding argument (c), examiner disagrees with applicant. Based on the arguments set forth by argument (a) and (b), the dependent claims stand as rejected.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon S Hoffman whose telephone number is 571-272-3863. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brandon Hoffman

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